

CLAIMS

1. A polyolefin microporous membrane having a membrane thickness of 1 to 30 μm , a void content of 30 to 60%, a gas transmission rate of 50 to 250 sec/100 cc, a piercing strength of 3.5 to 20.0 N/20 μm , a maximum pore size determined by the bubble point method of 0.08 to 0.20 μm , and a ratio of the maximum pore size to the average pore size (the maximum pore size/the average pore size) of 1.00 to 1.40.
2. The polyolefin microporous membrane according to claim 1, which is for use in electronic components.
3. A polyolefin separator for nonaqueous electrolyte batteries, comprising the polyolefin microporous membrane according to claim 1.
4. A nonaqueous electrolyte battery, characterized in that the polyolefin microporous membrane according to claim 3 is used as a separator.
5. A method for producing a polyolefin microporous membrane comprising: molding a mixture of a polyolefin resin, a plasticizer and an inorganic powder into a sheet while kneading and heat melting the mixture; extracting and removing the plasticizer and the inorganic powder from the sheet, respectively; and stretching the sheet at least uniaxially, wherein the inorganic powder has an average dispersion particle size of 0.01 to 5 μm and the ratio of the 95 vol% cumulative dispersion particle size and the 5 vol% cumulative dispersion particle size is 1.0 to 10.0.

6. The method according to claim 5, wherein the inorganic powder is silica powder.
7. The method according to claim 5, wherein the inorganic powder is silica powder prepared by a dry process.
8. A method for producing a separator for nonaqueous electrolyte batteries, comprising: molding a mixture of a polyolefin resin, a plasticizer and an inorganic powder into a sheet while kneading and heat melting the mixture; extracting and removing the plasticizer and the inorganic powder from the sheet, respectively; and stretching the sheet at least uniaxially to obtain a polyolefin microporous membrane, wherein the separator for nonaqueous electrolyte batteries comprises the polyolefin microporous membrane produced using the inorganic powder which has an average dispersion particle size of 0.01 to 5 μm and the ratio of the 95 vol% cumulative dispersion particle size to the 5 vol% cumulative dispersion particle size of 1.0 to 10.0.